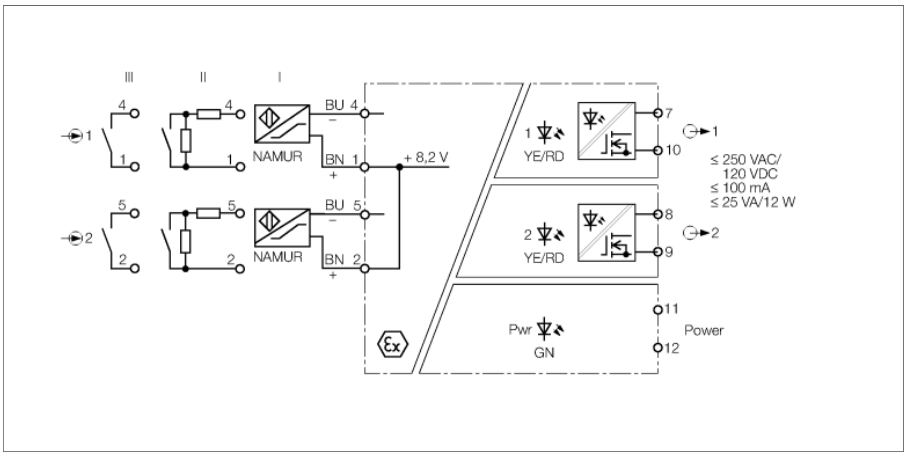
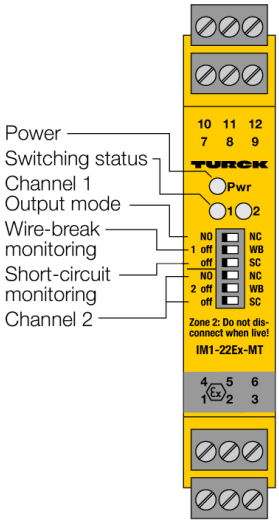
Isolating switching amplifier
2-channel
IM1-22EX-MT





The 2-channel IM1-22EX-MT isolating switching amplifier is equipped with intrinsically safe input circuits.

Sensors according to EN 60947-5-6 (NAMUR) or potential-free contactors can be connected to the device.

The output circuits feature 2 potential-free MOSFET transistors.

Via six switches on the front, the output mode (working or quiescent current behavior, i.e. NO/NC) as well as wire-break monitoring (WB) and short-circuit monitoring (SC) can be switched on and off separately for each channel.

When using mechanical contacts, wire-break and short-circuit monitoring must be switched off or the contacts must be wired to resistors (II) (see circuit diagram).

The Pwr LED lights green to indicate operational readiness. The 2-color LEDs 1 and 2 light yellow to indicate the switching status of the associated output. In the event of an input circuit error, the 2-color LED of the assigned faulty input turns red, with the input circuit monitoring switched on. Thereupon the associated output transistor is blocked.

- 2 transistor outputs (MOSFET)
- Output mode adjustable (NO/NC mode)
- Input circuits monitored for wire-break/ short-circuit (ON/OFF switchable)
- Complete galvanic isolation
- Input reverse-polarity protected
- ATEX, IECEx, UL, $_{c}$FM$_{us}$, CSA, TR CU, NEPSI, KOSHA, TIIS, CCOE, INMETRO
- Installation in zone 2

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Type	IM1-22EX-MT
ID	7541213

Nominal voltage	Universal voltage supply unit
Operating voltage	20…250 VAC
Frequency	40…70 Hz
Operating voltage U_B	20…125 VDC
Power consumption	≤ 3 W

NAMUR input	
NAMUR	EN 60947-5-6
Input circuit monitoring	on/off switchable
No-load voltage	8.2 VDC
Short-circuit current	8.2 mA
Input resistance	1 kΩ
Cable resistance	≤ 50 Ω
Switch-on threshold	1.75 mA
Switch-off threshold	1.55 mA
Wire breakage threshold	≤ 0.06 mA
Short-circuit threshold	≥ 6.4 mA

Output circuits	

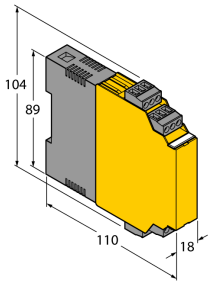
Semiconductor output circuits	
Output circuits (digital)	2 x MOSFET (potential-free, short-circuit proof)
Switching voltage	≤ 250 VAC
Switching voltage	≤ 120 VDC
Switching current per output	≤ 0.1 A
Switching frequency	≤ 1000 Hz

Galvanic isolation	
Test voltage	2.5 kV RMS

Important note	For Ex-applications the values specified in the corresponding Ex certificates (ATEX, IECEx, UL, etc.) apply.
Ex approval acc. to conformity certificate	TÜV 21 ATEX 303590 X
Application area	II (1) G, II (1) D
Ignition protection category	[Ex ia Ga] IIC; [Ex ia Da] IIIC
Ex approval acc. to conformity certificate	TÜV 06 ATEX 552968 X
Application area	II 3 G
Ignition protection type	Ex nA [ic Gc] IIC/IIB T4 Gc
Characteristic	linear

Displays/Operating elements	
Operational readiness	Green
Switching state	Yellow
Error indication	red

Dimensions



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Mechanical data	
Protection class	IP20
Flammability class acc. to UL 94	V-0
Ambient temperature	-25…+70 °C
	-25 ... +60 °C für UL, FM, TIIS
Storage temperature	-40…+80 °C
Dimensions	104 x 18 x 110 mm
Weight	145 g
Mounting instructions	DIN rail (NS35) or panel
Housing material	Plastic, Polycarbonate/ABS
Electrical connection	4 × 3-pin removable terminal blocks, reverse polarity protected, screw terminal
Terminal cross-section	1 × 2.5 mm²/2 × 1.5 mm²
Tightening torque	0.5 Nm

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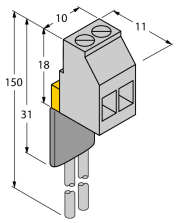
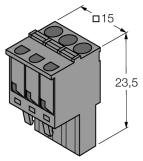
Accessories

Type code	Ident-No.		Dimension drawing
WM1 WIDER-STANDSMODUL	0912101	The resistor module WM1 meets the requirements for line monitoring between a mechanical contact and a TURCK signal processor. The input circuit of the signal processor is designed for sensors acc. to EN60947-5-6 (NAMUR) and equipped with a wire-break and short-circuit monitoring function.	
IM-CC-3X2BU/2BK	6900475	Cage clamp terminals for IM modules (Ex-devices with 18 mm overall width); includes: 2 pcs. 3-pin blue terminals and 2 pcs. 3-pin black terminals.	

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